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FINAL PLAN OF ACTION NORTH FUEL FARM JP-5 FUEL SPILL NAS CECIL FIELD FL
5/1/1991
ABB ENVIRONMENTAL



FINAL

**PLAN OF ACTION
NORTH FUEL FARM JP-5 FUEL SPILL
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

**CONTRACT TASK ORDER NO. 0021
NAVY CLEAN - DISTRICT I
CONTRACT NO. N62467-89-D-0317**

MAY 1991

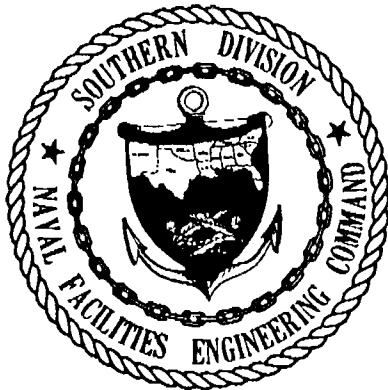


ABB Environmental Services, Inc.

ABB
ASEA BROWN BOVERI

FINAL PLAN OF ACTION

**CONTRACT NO. N62467-89-D-0317
CTO NO. 0021**

**NORTH FUEL FARM JP-5 FUEL SPILL
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

07 June 1991

Submitted By:

**ABB ENVIRONMENTAL SERVICES, INC.
2571 EXECUTIVE CENTER CIRCLE EAST
TALLAHASSEE, FLORIDA 32301**

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I. INTRODUCTION

On September 6, 1990, Southern Division (SOUTHDIV) Naval Facilities Engineering Command (NAVFACENGCOM) contracted ABB Environmental Services Inc. (ABB-ES) (Contract No. N62467-89-D-0317) to assist the Navy's Environmental Engineering Program by providing environmental and engineering support services for the Underground Storage Tank (UST) Program. The first step in the process of executing a Contract Task Order (CTO) is for ABB-ES to respond to a Statement of Work (SOW) by participating in a site visit to define the SOW and to develop a Work Plan. The Work Plan presents a description of the scope of services, a schedule showing the duration of the tasks, and estimated costs associated with the defined tasks.

On the evening of February 10, 1991, an estimated 900,000 gallon JP-5 jet fuel spill occurred at the North Fuel Farm (Facility 76) at Naval Air Station (NAS) Cecil Field. The spill filled containment ponds and contaminated approximately 5 miles of canals and ditches on the base. Emergency response actions recovered the majority of the fuel, which occurred at the northeast side of the fuel farm.

An unrelated Contamination Assessment was initiated at the North Fuel Farm on December 10, 1990 to assess the extent of petroleum contamination at various sites, resulting from previous spills. Three plumes were found at the Fuel Farm; one on the west side of the tanks and two on the southeast side of the tanks. The area to the northeast of the tank farm, where the recent major spill occurred, did not appear to have been previously contaminated.

This Work Plan describes the scope of services, presents milestone and Gantt schedules, and provides cost estimates for the work elements described in the SOW (CTO No. 21 dated February 19, 1991) for the Contamination Assessment of the JP-5 Fuel Spill at NAS Cecil Field. This Work Plan includes the following tasks:

- Management Activities

Management responsibilities include: cost tracking, internal and external cost reporting, communication, and deliverable processing and review. Monthly progress reporting is considered separately under Task 1 below.

Task 1 - Monthly Progress Reports

- Technical Activities

Task 2 - Preparation of Contamination Assessment Plans (CAPs), a Health and Safety Plan (HASp), and a Quality Assurance Plan (QAP)

Task 3 - Contamination Assessment Field Investigation

Task 4 - Preparation of Contamination Assessment Reports

Task 5 - Preparation of Follow-up Reports.

The following sections present the scope of services (Section II), key personnel (Section III), schedule (Section IV), and cost estimates (Section V) for each task.

II. SCOPE OF SERVICES

Task 1 - Monthly Progress Reports

ABB-ES will prepare Technical/Financial Monthly Reports (TFMR) for the duration of the project in accordance with the provisions of Part V, Section 3 of the contract. Each report will be in the format required in the contract (Part IX, Attachment A) and will summarize activities performed, any problems encountered, and proposed problem resolutions. It will also include a schedule update in the form of a Gantt chart. ABB-ES will notify SOUTHDIV immediately upon discovery of any significant new site conditions, including imminent hazard or substantial endangerment, and any deviation from the project schedule, plan, or budget.

The Phase I cost estimates reflect the preparation of 13 monthly reports for this purpose.

The key personnel and level of effort (LOE) estimated for this task include: Task Order Manager (104 hours) and Program Assistant (52 hours).

Task 2 - Preparation of CAPs, a HASP, and a QAP

Draft and final Contamination Assessment Plans (CAPs) and Health and Safety Plans (HASPs) will be developed and submitted to SOUTHDIV prior to beginning any field work at the site. The CAPs will present site background information, the overall technical approach, a description of the field activities, field techniques and methodologies, and project milestones and timeframes. The contamination assessment activities and subsequent reports (except PRAPs) will follow Florida Department of Environmental Regulations (FDER) guidelines, as outlined in the Florida Administrative Code (FAC) Chapter 17-770 and the SOUTHDIV report format guidance manual.

In lieu of a Quality Assurance Plan, ABB-ES will submit to SOUTHDIV copies of ABB-ES's FDER approved Comprehensive Quality Assurance Plan (ComQAP) that includes contamination assessments at petroleum sites. State regulations no longer require a separate Quality Assurance Project Plan for each site, only an approved Comprehensive Plan. It has been agreed between SOUTHDIV and ABB-ES that the submittal of ABB-ES's approved ComQAP will satisfy SOUTHDIV's Quality Assurance/Quality Control Plan requirement for sites under the CLEAN Underground Storage Tank (UST) Program.

The key personnel and LOE estimated for this task include: Health and Safety Manager (3 hours), Task Order Manager (24 hours), Senior Scientist (40 hours), Hydrologist (64 hours), Technical Editor (6 hours), Health and Safety Assistant (3 hours), Project Assistant (10 hours), Draftsperson (48 hours), and Clerical (32 hours).

Other direct costs (ODCs) include: communication charges, photocopying costs and report binding costs.

Task 3 - Contamination Assessment Field Investigations

Task 3 will include one start-up meeting at the site to initiate the field work and field investigation operations. The purpose of the Contamination Assessment is to assess the vertical and horizontal extent and to quantitatively characterize the petroleum contamination at each of the sites. Soil borings will be drilled using a power auger at the JP-5 Fuel Spill site and travel route to collect soil samples for Organic Vapor Analysis (OVA) screening following FDER Chapter 17-770.200 (2) guidelines. The screening of soil samples from borings will help in understanding the extent of contamination and provide information for placement of monitoring wells at each of the sites. Monitoring wells will be installed to characterize the contaminant plume and to assess its horizontal extent. Placement of wells will also be aided by a field gas chromatograph for measuring levels of benzene, ethylbenzene, toluene, and xylenes (BETX). Groundwater samples will be collected from the monitoring wells and analyzed for parameters required by FDER Chapter 17-770.600(8), FAC. Slug tests will be performed on wells at each of the sites for estimating aquifer hydraulic conductivity. In addition, a licensed Florida professional surveyor will survey the horizontal and vertical coordinates for each of the monitoring wells into either the USGS NAD'27 or base coordinate grid system. With the assistance of the base Environmental Coordinator, an inventory of potable water wells within 1/4 mile radius of each site will be conducted.

At the spill site, immediately northeast of the North Fuel Farm, 40 soil borings up to 6 feet in depth will be conducted along with the installation of 5 shallow (15 feet in depth) monitoring wells will be installed and 1 deep (up to 60 feet in depth) well. At Ponds 1 through 6, 20 soil borings will be conducted along with 4 shallow monitoring wells at each pond. At Ponds 7 and 8, 20 soil borings will be conducted and 2 shallow monitoring wells at each pond. Along the remainder of the canal route that the spilled fuel travelled, 3 soil borings will be collected at 45 stations. Each station is on a 500 foot center along the travel route. In addition, 2 sediment samples and 2 surface water samples will be collected downstream of the furthest point that the spilled fuel was known to have travelled. All collected samples for laboratory analysis will be tested for the Kerosene analytical group.

No precision tank testing has been scheduled for this site.

It should be noted that during the field investigation of this program, ABB-ES personnel and their subcontractor(s) will coordinate their efforts with site personnel to dispose of contaminated fluids and soils. In addition, since much of the study area for this investigation is in a heavily wooded area, any clearing and grubbing that may be required for the purpose of installing monitoring wells at necessary locations or the movement of equipment (drill rig, etc.) will be the sole responsibility of the Navy. It will also be the Navy's responsibility to dispose of any hazardous waste, should it be encountered during ABB-ES's activities.

The key personnel and LOE estimated for this task include: Quality Assurance Manager (24 hours), Task Order Manager (120 hours), Senior Scientist (200 hours), Engineer (550 hours), Hydrologist (600 hours), Contract Manager (16 hours), Project Assistant (64 hours), and Clerical (16 hours).

Other direct costs (ODCs) include: subcontract costs for drilling, analytical laboratory, and professional surveying services.

Additionally it is noted that performance of this task order is predicated on the availability of the equipment listed hereunder. Other direct costs (ODCs) include: rental of an Organic Vapor Analyzer, a field gas chromatograph, an oil/water interface probe, decontamination equipment and supplies, power auger, pumps, magnetometer, bailers, data logger and transducers, groundwater sampling package, miscellaneous tools, health and safety program and equipment costs, and miscellaneous field expendables. These requirements will be revisited subsequent to government approval of ABB-ES's equipment lease/purchase analysis and recommendations thereto.

Task 4 - Preparation of Contamination Assessment Reports

A draft (90%), draft final (100%), and final Contamination Assessment Report (CAR) will be prepared and submitted to SOUTHDIR and the activity upon completion of the field investigation. The report will discuss site background information, site conditions, findings, and recommendations for the JP-5 Fuel Spill site at NAS Cecil Field pursuant to FDER Chapter 17-770.630(1) FAC. Recommendations shall be made as to the need for any follow-up reports. Site location maps, locations of soil borings and monitoring wells, and contamination delineation maps will be included with the report.

The key personnel and LOE estimated for this task include: Task Order Manager (40 hours), Senior Engineer (4 hours), Senior Scientist (120 hours), Hydrologist (160 hours) Technical Editor (3 hours), Project Assistant (32 hours), Draftsperson (80 hours), and Clerical (40 hours).

Other direct costs (ODCs) include: car rental, subsistence, communication charges, shipping costs, report photocopying costs and binding costs.

Task 5 -Preparation of Follow-up Reports

Based on the findings, conclusions, and recommendations of the final CAR, a draft (90%), draft-final (100%), and final follow-up report will be prepared for the JP-5 Fuel Spill site at NAS Cecil Field. The report shall be either a No Further Action Proposal (NOFAP), a Monitoring Only Proposal (MOP), or a Preliminary Remedial Action Plan (PRAP).

For the purpose of costing it will be assumed that a PRAP will be developed for the JP-5 Fuel Spill site. The PRAP will include the following items

- o summary sheet of the Contamination Assessment Report,
- o general discussion of the technical and economic feasibility of the selected remedial system and why it was chosen over other remedial options,
- o general discussion of the rationale of the selected system,
- o comparison of contaminant levels found with existing state and EPA cleanup criteria in table format,
- o disposition and expected contamination concentrations in any effluent from the proposed cleanup method,
- o cost estimates and schedules for the design phase, construction/startup phase and the operation phase,
- o designation of monitoring wells and proposed methodology for verifying accomplishment of PRAP goals (cleanup levels),
- o general discussion of the treatment of contaminated soils, and
- o recommendations for conducting pilot studies and obtaining additional information.

The PRAP will compare (two to four) remedial technologies for cleanup of both groundwater and soil, and the selected technology will be justified based on technical and economic feasibility. A conceptual design and rationale for the design will be provided for the selected remedial technology.

It is our understanding that Southern Division will develop performance specifications for construction that are based on the PRAP and the CAR. While these documents will provide some of the information necessary to develop performance specifications, neither document will be biddable. Additional site information that may be needed to develop the performance specifications but not included in this scope is as follows:

- o existing conditions site survey plans,

- o locations of existing utilities, and
- o location and available amount of electric power.

The key personnel and LOE estimated for this task include: Task Order Manager (24 hours), Senior Engineer (40 hours), Senior Scientist (32 hours), Engineer (80 hours), Engineering Technician (40 hours), Technical Editor (4 hours), Project Assistant (16 hours), Draftsperson (48 hours), and Clerical (40 hours).

Other direct costs (ODCs) include: communications and shipping charges, report copying and binding costs.

III. KEY PERSONNEL

The designated roles for the Fuel Spill Contamination Assessment Program work at NAS Cecil Field are as follows:

- Program Manager. The Program Manager, Tony Allen, is responsible for oversight and management of the overall multi-installation Navy CLEAN contract for District I. In this position, Mr. Allen is able to identify overall program needs, promote technology and other information transfer between various Navy CLEAN projects, and direct resources as appropriate, for effective and timely completion of program activities.
- Task Order Manager. The Task Order Manager for the Contamination Assessment at NAS Cecil Field will be Peter Redfern, C.P.E. Mr. Redfern is responsible for maintaining the project schedule and budget and for evaluating the appropriateness of the services provided for the CTO. Mr. Redfern is also responsible for the day-to-day conduct of the work, including the integration of the input of supporting disciplines and subcontractors. He will review the on-going quality control during the performance of the work and the clarity and usefulness of all project work products.

Specific responsibilities of this role include:

- initiating project activities;
- participating in the work plan preparation and staff assignments;
- identifying and fulfilling equipment and other resource requirements;
- monitoring task activities to ensure compliance with established budgets, schedules, and scope of work; and
- regularly interacting with the EIC, the Program Manager, the Technical Director, and others as appropriate, on the status of the

project.

. Technical Director. Mr. Kenneth L. Busen, P.G. will be the Technical Director of the Contamination Assessment at NAS Cecil Field. Mr. Busen will be responsible for evaluating the appropriateness and adequacy of the technical services provided for the CTO and for developing the technical approach and LOE required to address each of the Work Plan tasks. Mr. Busen will also be responsible for reviewing the on-going quality control during the performance of the work, and the technical integrity of conclusions and recommendations.

Specific responsibilities of this role include:

- . overall technical responsibility for the project;
- . initiating project activities;
- . participating in the work plan preparation;
- . monitoring the technical adequacy of task activities; and
- . regularly interacting with the EIC, Program Manager, Task Order Manager, and others as appropriate, on the status of the project.

. Quality Review Board. A Quality Review Board comprised of senior technical staff from the ABB-ES team will assist the Task Order Manager and Technical Director by providing review of the technical aspects of the project to assure they are produced in accordance with corporate policy, and meet the requirements of U.S. Navy Southern Division.

Michael Keirn, Ph.D., Kathleen O'Neil, P.G., and Margaret Layne, P.E. will comprise the ABB-ES technical quality review board and will be actively involved in assuring the quality of the technical and engineering services and appropriateness of methodologies, conclusions and recommendations of the Contamination Assessment at NAS Cecil Field.

. Contract Manager. The position of contract manager is established because of the importance of day-to-day scope, schedule and budget monitoring for the NAS Cecil Field JP-5 Fuel Spill Contamination Assessment Program between ABB-ES and SOUTHDIV contracts. It is expected that program decisions will be occurring frequently. Therefore, it is necessary to anticipate and immediately implement contractual actions (i.e., amend subcontracts, initiate procurement actions, etc.) to carry out the program plans. Laurie Huffman will be responsible to the Task Order Manager and will be the principal communication link to the U.S. Navy Southern Division contract officer. Three specific tasks for which Ms. Huffman will be responsible are the following:

- establish and oversee all subcontract actions to support the project;
- review technical/financial monthly reports for contractual conformance;
- ensure that appropriate financial record and reporting requirements are met.

IV. SCHEDULE

Attachment A depicts a Gantt chart representative of the proposed schedule for completion of the tasks described herein along with milestone dates for submission of specific project deliverables. The date of initiation of these services is in conformance with the schedule requirements agreed to within the FDER and Navy Consent Order Agreement for investigation of petroleum sites in Florida.

V. COST

Attachment B (Table 1 and the fee itemization form) presents the cost estimate to complete the scope of services described herein. A supplement sheet has been added to allow the itemization of field equipment and supplies proposed for Task 3 (Contamination Assessment Field Investigation), this supplement refers only to Task 3.

VI. FEE ITEMIZATION FORM SCOPE LIMITATION

The purpose of this paragraph is to clearly define the scope and assumptions made for this fee proposal should it be necessary to enact provisions delineated at Part VII, Para. 22 of the subject contract in accordance with FAR 5243-2.

Specific Parameters:

As outlined specifically in Work Elements 1 through 10 of the SOW dated February 19, 1991.

Period of Performance Parameters:

Costs presented are estimated to be incurred through September, 1992.

ATTACHMENT A
SCHEDULE

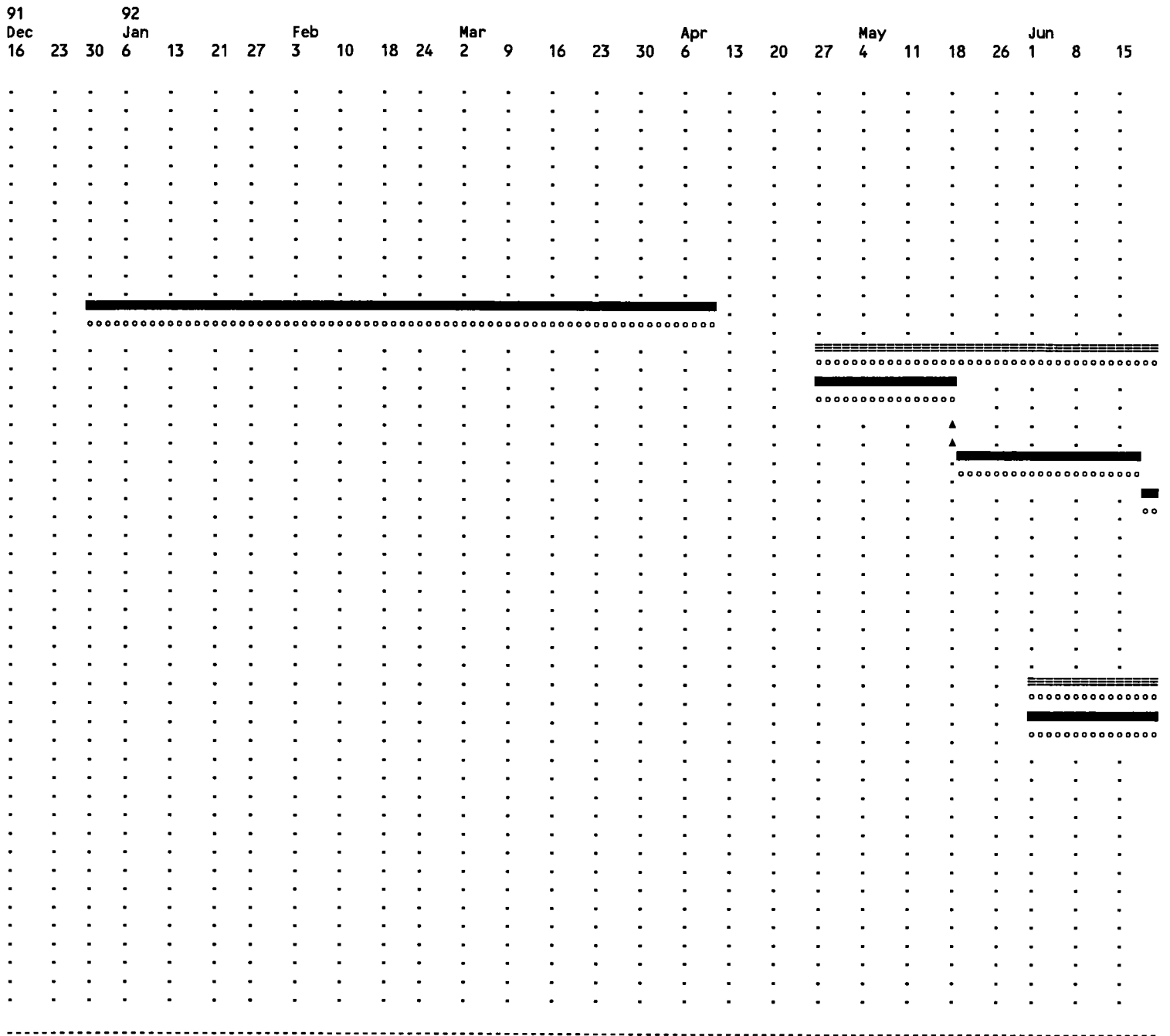
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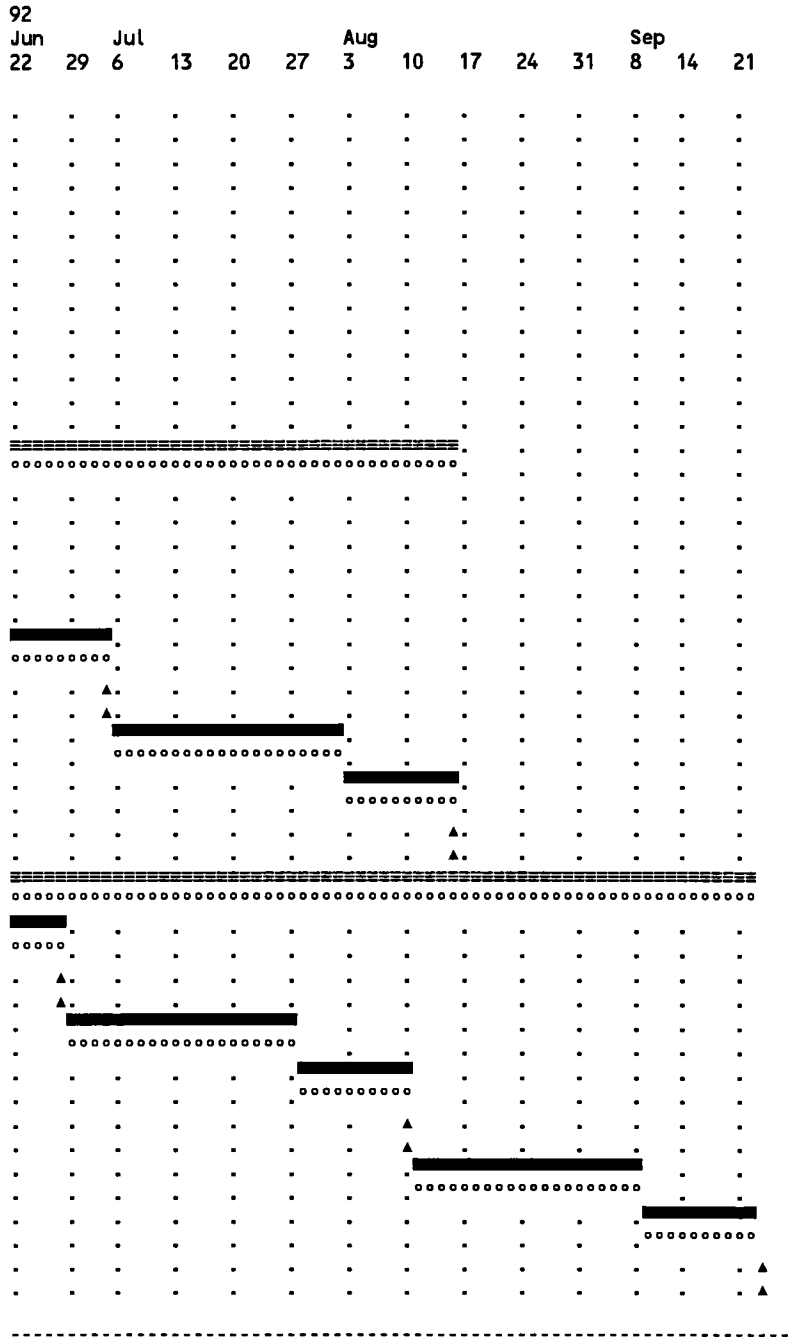
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██████ Detail Task      ██████ Summary Task      ○○○○ Baseline
..████ (Progress)      ██████ (Progress)      ▶▶▶ Conflict
██████ (Slack)          ██████ (Slack)          ..████ Resource delay
Progress shows Percent Achieved on Actual
----- Scale: 8 hours per character -----

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TIME LINE Gantt Chart Report, Strip 1





ATTACHMENT B
COST ESTIMATE

CLEAN FEE ITEMIZATION FORM SOUTHDIV ENVIRONMENTAL DIVISION

DATE OF SCOPE: 24 May 1991 A&E FIRM: ABB Environmental Services, Inc.
 CTO: 0021 DATE OF ESTIMATE: 24 May 1991 CONTRACT NO.: N62467-89-D-0317

PROJECT: NAS Cecil Field North Fuel Farm JP-5 Spill

FUNDING: Facility Specific

ACTIVITY: Naval Air Station Cecil

UIC CODE: N60200 LOCATION: Jacksonville, Florida

ITEM	RATE/HR.	OFFICE		FIELDWORK		TOTAL	
		LABOR HOURS	COST(S)	LABOR HOURS	COST(S)	LABOR HOURS	COST(S)
Program Manager	36.50		\$0.00		\$0.00		\$0.00
Quality Assurance Manager	25.50	24	\$612.00		\$0.00	24	\$612.00
Task Order Manager	29.00	312	\$9,048.00		\$0.00	312	\$9,048.00
Senior Engineer	29.00	44	\$1,276.00		\$0.00	44	\$1,276.00
Senior Scientist	29.10	392	\$11,407.20		\$0.00	392	\$11,407.20
Engineer	18.50	630	\$11,655.00		\$0.00	630	\$11,655.00
Geologist	19.00		\$0.00		\$0.00		\$0.00
Hydrologist	20.00	824	\$16,480.00		\$0.00	824	\$16,480.00
Toxicologist	18.00		\$0.00		\$0.00		\$0.00
Program Assistant	13.00	174	\$2,262.00		\$0.00	174	\$2,262.00
Clerical/Word Processing	10.00	128	\$1,280.00		\$0.00	128	\$1,280.00
Accounting	14.00		\$0.00		\$0.00		\$0.00
Contract Manager	19.50		\$0.00		\$0.00		\$0.00
Technical Editor	13.26	13	\$172.38		\$0.00	13	\$172.38
Health & Safety Assistant	12.50	3	\$37.50		\$0.00	3	\$37.50
Health & Safety Manager (CIH)	24.00	3	\$72.00		\$0.00	3	\$72.00
Quality Assurance Assistant	19.71		\$0.00		\$0.00		\$0.00
Cad Operator/Sr. Draftsperson	15.60		\$0.00		\$0.00		\$0.00
Draftsperson	10.50	176	\$1,848.00		\$0.00	176	\$1,848.00
Air Quality Engineer/Scientist	16.94		\$0.00		\$0.00		\$0.00
Senior Hydrologist	33.79		\$0.00		\$0.00		\$0.00
Senior Chemist (CLP Qual.)	22.44		\$0.00		\$0.00		\$0.00
Public Relations	20.00		\$0.00		\$0.00		\$0.00
Technician	13.00	40	\$520.00		\$0.00	40	\$520.00
Senior Contract Manager	28.50		\$0.00		\$0.00		\$0.00
Technical Expert (PhD-Sci/Eng)	35.00		\$0.00		\$0.00		\$0.00
TOTAL DIRECT LABOR	XXXXX	2,763	\$56,670.08	0	\$0.00	2,763	\$56,670.08
X Fringe (.3312)	XXXXX	XXXXX	\$18,769.13	XXXXX	\$0.00	XXXXX	\$18,769.13
X Overhead (.5413)	XXXXX	XXXXX	\$40,835.24	XXXXX	\$0.00	XXXXX	\$40,835.24
X G&A (.0733)	XXXXX	XXXXX	\$8,522.92	XXXXX	\$0.00	XXXXX	\$8,522.92
Total Burdened Dir. Labor	XXXXX	XXXXX	\$124,797.37	XXXXX	\$0.00	XXXXX	\$124,797.37

PART II - OTHER DIRECT COSTS (Itemized on Supplement Sheets)


ITEM	UNIT COST(S)	QUANTITY	TOTAL
Telephone/Communications	\$5.00/Call	215	\$1,075
Postage/Freight	See attached sheet		\$1,575
Equipment/Expendables	See attached sheet		\$10,665.60
Subtotal			\$13,315.60
X G&A (.0733)			\$976.03
TOTAL	XXXXXXX	XXXXXXX	\$14,291.63

PART III - TRAVEL (Itemized on Supplement Sheets)

Subsistence	See attached sheet		\$10,582
Car/Van Rental and Fuel	See attached sheet		\$5,300
Subtotal			\$15,882.00
X G&A (.0733)			\$1,164.15
TOTAL TRAVEL EXPENSES	XXXXX	XXXXX	\$17,046.15

PART IV - SUBCONTRACTOR SERVICES (Itemized on Supplement Sheets)

Drilling/Laboratory/Survey	See attached sheet		\$54,070
Copies & Report Binding	See attached sheet		\$279
Subtotal			\$54,349.00
X G&A (.0733)			\$3,983.78
TOTAL SUBCONTRACTOR EXPENSES	XXXXX	XXXXX	\$58,332.78

	TOTAL	
	LABOR HOURS	COST(S)
TOTAL PART I (Direct Labor)	2763	\$124,797.37
TOTAL PART II (Other Direct Costs)		\$14,291.63
TOTAL PART III (Travel Expenses)		\$17,046.15
SUBTOTAL (Parts I, II, & III)		\$156,135.15
Award Fee Pool @ <u>9</u> % x Parts I, II, & III		\$14,052.16
Enter Award Fee % here <u>9</u> %		
Parts I, II, & III TOTAL		170,187.31
TOTAL PART IV (Subcontractor Expenses)		\$58,332.78
Award Fee Pool @ <u>4.5</u> % x Part IV		\$2,624.98
Enter Award Fee % here <u>4.5</u> %		
Part IV TOTAL		\$60,957.76
TOTAL: (Parts I, II, & III)		\$156,135.15
(Part IV)		\$60,957.76
GRAND TOTAL		\$231,145.07
A&E Signature 	Date 6-7-91	Telephone 904-656-1293
EIC Signature	Date	Code
		Code 18C Approval
		Date

TASK: CUMULATIVE COST MODEL
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION: TASKS 1 - 5

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	312	\$29.00	\$9,048.00
SENIOR SCIENTIST	392	\$29.10	\$11,407.20
SENIOR ENGINEER	44	\$29.00	\$1,276.00
QUALITY ASSURANCE MANAGER	24	\$25.50	\$612.00
HEALTH & SAFETY MANAGER	3	\$24.00	\$72.00
ENGINEER	630	\$18.50	\$11,655.00
HYDROLOGIST	824	\$20.00	\$16,480.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN	40	\$13.00	\$520.00
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT	3	\$12.50	\$37.50
CONTRACTS MANAGER	0	\$19.50	\$0.00
PROJECT ASSISTANT	174	\$13.00	\$2,262.00
DRAFTING	176	\$10.50	\$1,848.00
CLERICAL/WORDPROCESSOR	128	\$10.00	\$1,280.00
TECHNICAL EDITOR	13	\$13.26	\$172.38
TOTAL DIRECT LABOR	2763		\$56,670.08
OVERHEAD	56670.08	0.3312	\$18,769.13
FRINGE	75439.210	0.5413	\$40,835.24
TOTAL LABOR OVERHEAD			\$59,604.38
AIRFARE			
CAR/FUEL	82	\$50.00	\$4,100.00
PER DIEM	143	\$74.00	\$10,582.00
FIELD VAN	15	\$80.00	\$1,200.00
TOTAL TRAVEL			\$15,882.00
PHONE & TELEX	215	\$5.00	\$1,075.00
SHIPPING			\$1,575.00
COMPUTER TIME			
EQUIPMENT			\$10,115.60
EXPENDABLES	11	\$50.00	\$550.00
SUBTOTAL OTHER DIRECT COSTS			\$29,197.60
G&A - LABOR, O/H, ODC	145472.05	0.0733	\$10,663.10
SUBCONTRACT			
DRILLING			\$27,329.00
LABORATORY			\$19,741.00
SURVEY			\$7,000.00
COPYING & BINDING			\$279.00
SUBTOTAL SUBCONTRACT			\$54,349.00
G&A - SUBCONTRACT	54349	0.0733	\$3,983.78
TOTAL COST			\$214,467.94
AWARD FEE - LABOR, O/H, ODC	156135.16	0.09	\$14,052.16
AWARD FEE - SUBCONTRACT	58332.781	0.045	\$2,624.98
TOTAL PRICE			\$231,145.08

TASK: TASK 1 - MONTHLY PROGRESS REPORTS
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION: PREPARE MONTHLY PROGRESS REPORTS

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	104	\$29.00	\$3,016.00
SENIOR SCIENTIST		\$29.10	
SENIOR ENGINEER		\$29.00	
QUALITY ASSURANCE MANAGER		\$25.50	
HEALTH & SAFETY MANAGER		\$24.00	
ENGINEER		\$18.50	
HYDROLOGIST		\$20.00	
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN		\$13.00	
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT		\$12.50	
CONTRACTS MANAGER		\$19.50	
PROJECT ASSISTANT	52	\$13.00	\$676.00
DRAFTING		\$10.50	
CLERICAL/WORDPROCESSOR		\$10.00	
TECHNICAL EDITOR		\$13.26	
TOTAL DIRECT LABOR	156		\$3,692.00
OVERHEAD	3692	0.3312	\$1,222.79
FRINGE	4914.79	0.5413	\$2,660.38
TOTAL LABOR OVERHEAD			\$3,883.17
AIRFARE			
CAR/FUEL		\$50.00	
PER DIEM		\$74.00	
TOTAL TRAVEL			
PHONE & TELEX	13	\$5.00	\$65.00
SHIPPING			
COMPUTER TIME			
EQUIPMENT			
EXPENDABLES			
SUBTOTAL OTHER DIRECT COSTS			\$65.00
G&A - LABOR, O/H, ODC	7840.17	0.0733	\$580.02
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
COPYING & BINDING			
SUBTOTAL SUBCONTRACT			\$0.00
G&A - SUBCONTRACT	0	0.0733	\$0.00
TOTAL COST			\$8,200.19
AWARD FEE - LABOR, O/H, ODC	8200.19	0.09	\$738.02
AWARD FEE - SUBCONTRACT	0	0.045	\$0.00
TOTAL PRICE			\$8,938.21

TASK: TASK 2 - DRAFT & FINAL HASP AND CAP
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION:

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	24	\$29.00	\$696.00
SENIOR SCIENTIST	40	\$29.10	\$1,164.00
SENIOR ENGINEER		\$29.00	
QUALITY ASSURANCE MANAGER		\$25.50	
HEALTH & SAFETY MANAGER	3	\$24.00	\$72.00
ENGINEER		\$18.50	
HYDROLOGIST	64	\$20.00	\$1,280.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN		\$13.00	
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT	3	\$12.50	\$37.50
CONTRACTS MANAGER		\$19.50	
PROJECT ASSISTANT	10	\$13.00	\$130.00
DRAFTING	48	\$10.50	\$504.00
CLERICAL/WORDPROCESSOR	32	\$10.00	\$320.00
TECHNICAL EDITOR	6	\$13.26	\$79.56
TOTAL DIRECT LABOR	230		\$4,283.06
OVERHEAD	4283.06	0.3312	\$1,418.55
FRINGE	5701.61	0.5413	\$3,086.28
TOTAL LABOR OVERHEAD			\$4,504.83
AIRFARE			
CAR/FUEL		\$50.00	\$0.00
PER DIEM		\$74.00	\$0.00
TOTAL TRAVEL			\$0.00
PHONE & TELEX	12	\$5.00	\$60.00
SHIPPING	4	\$25.00	\$100.00
COMPUTER TIME			
EQUIPMENT			
EXPENDABLES			
SUBTOTAL OTHER DIRECT COSTS			\$160.00
G&A - LABOR, O/H, ODC	8947.89	0.0733	\$655.88
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
COPYING & BINDING			\$90.00
SUBTOTAL SUBCONTRACT			\$90.00
G&A - SUBCONTRACT	90	0.0733	\$6.60
TOTAL COST			\$9,700.37
AWARD FEE - LABOR, O/H, ODC	9603.77	0.09	\$864.34
AWARD FEE - SUBCONTRACT	96.60	0.045	\$4.35
TOTAL PRICE			\$10,569.05

TASK: TASK 3 - FIELD INVESTIGATION
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION:

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	120	\$29.00	\$3,480.00
SENIOR SCIENTIST	200	\$29.10	\$5,820.00
SENIOR ENGINEER		\$29.00	
QUALITY ASSURANCE MANAGER	24	\$25.50	\$612.00
HEALTH & SAFETY MANAGER		\$24.00	
ENGINEER	550	\$18.50	\$10,175.00
HYDROLOGIST	800	\$20.00	\$12,000.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN		\$13.00	
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT		\$12.50	
CONTRACTS MANAGER		\$18.50	\$0.00
PROJECT ASSISTANT	64	\$13.00	\$832.00
DRAFTING		\$10.50	
CLERICAL/WORDPROCESSOR	16	\$10.00	\$160.00
TECHNICAL EDITOR		\$13.26	
TOTAL DIRECT LABOR	1574		\$33,079.00
OVERHEAD	33079	0.3312	\$10,955.76
FRINGE	44034.764	0.5413	\$23,836.02
TOTAL LABOR OVERHEAD			\$34,791.78
AIRFARE			
CAR/FUEL	80	\$50.00	\$4,000.00
PER DIEM	140	\$74.00	\$10,360.00
FIELD VAN	15	\$80.00	\$1,200.00
TOTAL TRAVEL			\$15,560.00
PHONE & TELEX	160	\$5.00	\$800.00
SHIPPING	10	\$135.00	\$1,350.00
COMPUTER TIME			
EQUIPMENT			\$10,115.60
EXPENDABLES	11	\$50.00	\$550.00
SUBTOTAL OTHER DIRECT COSTS			\$28,375.60
G&A - LABOR, O/H, ODC	96246.382	0.0733	\$7,054.86
SUBCONTRACT			
DRILLING			\$27,329.00
LABORATORY			\$19,741.00
SURVEY			\$7,000.00
COPYING & BINDING			
SUBTOTAL SUBCONTRACT			\$54,070.00
G&A - SUBCONTRACT	54070	0.0733	\$3,963.33
TOTAL COST			\$181,334.57
AWARD FEE - LABOR, O/H, ODC	103301.24	0.09	\$9,297.11
AWARD FEE - SUBCONTRACT	58033.331	0.045	\$2,611.50
TOTAL PRICE			\$173,243.19

TASK: TASK 4 - PREPARATION OF DRAFT & FINAL CARs
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION:

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	40	\$29.00	\$1,160.00
SENIOR SCIENTIST	120	\$29.10	\$3,492.00
SENIOR ENGINEER	4	\$29.00	\$116.00
QUALITY ASSURANCE MANAGER		\$25.50	
HEALTH & SAFETY MANAGER		\$24.00	
ENGINEER		\$18.50	
HYDROLOGIST	160	\$20.00	\$3,200.00
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN		\$13.00	
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT		\$12.50	
CONTRACTS MANAGER		\$19.50	
PROJECT ASSISTANT	32	\$13.00	\$416.00
DRAFTING	80	\$10.50	\$840.00
CLERICAL/WORDPROCESSOR	40	\$10.00	\$400.00
TECHNICAL EDITOR	3	\$13.26	\$39.78
TOTAL DIRECT LABOR	479		\$9,663.78
OVERHEAD	9663.78	0.3312	\$3,200.64
FRINGE	12864.42	0.5413	\$6,963.51
TOTAL LABOR OVERHEAD			\$10,164.16
AIRFARE			
CAR/FUEL	2	\$50.00	\$100.00
PER DIEM	3	\$74.00	\$222.00
TOTAL TRAVEL			\$322.00
PHONE & TELEX	10	\$5.00	\$50.00
SHIPPING	6	\$25.00	\$150.00
COMPUTER TIME			
EQUIPMENT			
EXPENDABLES			
SUBTOTAL OTHER DIRECT COSTS			\$522.00
G&A - LABOR, O/H, ODC	20349.93	0.0733	\$1,491.65
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
COPYING & BINDING			\$216.00
SUBTOTAL SUBCONTRACT			\$216.00
G&A - SUBCONTRACT	216	0.0733	\$15.83
TOTAL COST			\$22,073.42
AWARD FEE - LABOR, O/H, ODC	21841.59	0.09	\$1,965.74
AWARD FEE - SUBCONTRACT	231.83	0.045	\$10.43
TOTAL PRICE			\$24,049.60

TASK: TASK 5 - PREPARATION OF FOLLOW-UP REPORT
PROJECT NAME: NAS CECIL NORTH FUEL FARM JP-5 SPILL
RESPONSIBLE: PETER REDFERN

TASK DESCRIPTION:

DESCRIPTION	BASE	RATE	AMOUNT
TASK ORDER MANAGER	24	\$29.00	\$696.00
SENIOR SCIENTIST	32	\$29.10	\$931.20
SENIOR ENGINEER	40	\$29.00	\$1,160.00
QUALITY ASSURANCE MANAGER		\$25.50	
HEALTH & SAFETY MANAGER		\$24.00	
ENGINEER	80	\$18.50	\$1,480.00
HYDROLOGIST		\$20.00	
QUALITY ASSURANCE ASSISTANT		\$19.71	
TECHNICIAN	40	\$13.00	\$520.00
TECHNICAL EXPERT		\$35.00	
HEALTH & SAFETY ASSISTANT		\$12.50	
CONTRACTS MANAGER		\$19.50	
PROJECT ASSISTANT	16	\$13.00	\$208.00
DRAFTING	48	\$10.50	\$504.00
CLERICAL/WORDPROCESSOR	40	\$10.00	\$400.00
TECHNICAL EDITOR	4	\$13.26	\$53.04
TOTAL DIRECT LABOR	324		\$5,952.24
OVERHEAD	5952.24	0.3312	\$1,971.38
FRINGE	7923.62	0.5413	\$4,289.06
TOTAL LABOR OVERHEAD			\$6,260.44
AIRFARE			
CAR/FUEL		\$50.00	\$0.00
PER DIEM		\$74.00	\$0.00
TOTAL TRAVEL			\$0.00
PHONE & TELEX	20	\$5.00	\$100.00
SHIPPING	2	\$25.00	\$50.00
COMPUTER TIME			
EQUIPMENT			
EXPENDABLES			
SUBTOTAL OTHER DIRECT COSTS			\$150.00
G&A - LABOR, O/H, ODC	12362.67	0.0733	\$906.18
SUBCONTRACT			
DRILLING			
LABORATORY			
SURVEY			
COPYING & BINDING			\$63.00
SUBTOTAL SUBCONTRACT			\$63.00
G&A - SUBCONTRACT	63	0.0733	\$4.62
TOTAL COST			\$13,336.48
AWARD FEE - LABOR, O/H, ODC	13268.86	0.09	\$1,194.20
AWARD FEE - SUBCONTRACT	67.62	0.045	\$3.04
TOTAL PRICE			\$14,533.72